a tubular casing capable of withstanding high temperature and pressure environments having an internal cavity and an opening in at least one end permitting access to said internal cavity, the opening including a plug region having a greater diameter than the diameter of the internal cavity along at least a part of its length, the plug region extending from the opening to the internal cavity;

a component in the internal cavity having at least a first lead required to exit the pressure vessel; and

a high temperature, high pressure resistant plug sealing against a length of the first lead passing through the plug shaped to conform to the plug region and sealing the opening when located therein, whereby increased external pressure compresses the plug forcing it towards the internal cavity increasing the seal around the lead and around the plug region.

10. (Twice Amended) The pressure vessel of Claim 9 wherein said pressure vessel further comprises: a cap formed from a polymer material, said cap extending beyond the external surface of said plug thereby forming an additional fluid barrier over the surface of the plug.

11. (Amended) A pressure vessel capable of withstanding extreme hydrostatic pressure and elevated temperatures, comprising:

a tubular cylindrical casing capable of withstanding external hydrostatic pressures and elevated temperatures having a hollow interior and an opening in at least one end permitting access to the hollow interior;

a component in the hollow interior having at least a first lead required to exit the tubular casing;

an end plug having an outer cylindrical surface adapted to force fit in the opening of the cylindrical casing, the end plug having a through-hole through its length with a cross-section at least along a part of its length that diminishes in diameter with distance from the opening of the cylindrical casing; and

a ceramic adhesive plug sealing against a length of the first lead passing through the through hole of the end plug shaped to conform to the through-hole in the end plug filling substantially all of the void space within the through-hole not occupied by the lead, thereby sealing the through-hole in the end plug, whereby increased external pressure compresses the ceramic adhesive plug forcing it towards the internal cavity increasing the seal around the lead and around the through-hole in the end plug.

12. (Amended) The pressure vessel of claim 11 wherein the end plug is formed of steel and has an O-ring positioned in a channel machined in the plug to receive the O-ring, the O-ring and channel being adapted to provide a seal between the outer cylindrical surface of the end plug and the opening of the cylindrical casing.

14. (Amended) The pressure vessel of claim 12 wherein the through-hole of the end plug is circular in cross section, and

the lead exiting the opening is at least a first optical fiber having a plastic jacket covering the cladding, the plastic jacket on the optical fiber length passing through the through-hole being removed, thereby exposing the cladding, permitting a better seal between the ceramic adhesive plug and the optical fiber.

15. (Amended) The pressure vessel of claim 12 wherein the through-hole has an inner surface with at least a portion being formed to have an irregular surface region for improved bonding with the ceramic adhesive plug.

16. (Amended) The pressure vessel of claim 14 further comprising:

a cap formed from a polymer material to encapsulate the exposed cladding and to cover and extend beyond the ceramic adhesive plug thereby forming a fluid barrier over the surface of the plug.

17. (Amended) A pressure vessel capable of withstanding elevated hydrostatic pressures and elevated temperatures comprising:

a tubular cylindrical casing capable of withstanding extreme hydrostatic pressures having a hollow interior and a first and second opening at each end permitting access to said hollow interior;

an optical component in said hollow interior having at least a plurality of optical fiber pigtails extending from the optical component;

a first and second end plug in the respective first and second opening, each end plug having an outer cylindrical surface adapted to force fit into its respective opening of the cylindrical casing, at least one end plug having a through-hole through its length with a cross-section at least along a part of its length that diminishes in diameter with distance from an opening of the cylindrical casing; and

an adhesive plug sealing against a length of the optical fiber pigtails passing through the through-hole of the end plug shaped to conform to the through-hole in the end plug filling substantially all of the void space within the through-hole not occupied by the optical fiber pigtails, thereby sealing the through-hole in the end plug.

18. (Amended) The pressure vessel of claim 17 wherein

the tubular cylinder casing and the first and second plugs are formed of steel and wherein the optical fibers exiting the opening are at least a first and second optical fiber having a plastic